199392

Banks, Kendra

From: KALLAMBELLA VIJAYAKUMAR [kallambella.vijayakumar@uspto.gov]
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To: STIC-EIC1700
Subject: Database Search Request, Serial Number: 09/921238

Requester:
KALLAMBELLA VIJAYAKUMAR (P/1751)
Art Unit:
GROUP ART UNIT 1751
Employee Number:
79358
Office Location:
REM 09D70
Phone Number:
(571)272-1324
Mailbox Number:

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08/02/2000
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Particularly claims 2, 38 and 114

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L69  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2002:107295  HCAPLUS
DN   136:153747
ED   Entered STN:  10 Feb 2002
TI   Transesterified C8-22-vegetable oils as refrigeration
     lubricating oils and heat-transfer fluids
IN   Mosier, Benjamin; Duffy, Bryn J.
PA   MJ Research & Development, L.P., USA
SO   PCT Int. Appl., 49 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  C07C0069-732
     ICS  C11C0003-10; C07F0009-09; C07C0305-04; C10M0141-00; C09K0005-00;
          C07C0067-03
CC   51-8 (Fossil Fuels, Derivatives, and Related Products)
     Section cross-reference(s): 45
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2002010114        A2    20020207    WO 2001-US24369        20010802 <--
     WO 2002010114        A3    20020815
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
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             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
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             VN, YU, ZA, ZW
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     AU 2001081027        A5    20020213    AU 2001-81027          20010802 <--
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EP 1307422	A2	20030507	EP 2001-959474	20010802 <--	
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TW 225858	B1	20050101	TW 2001-90118924	20010802 <--	
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WO 2001-US24369	W	20010802 <--			

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002010114	ICM	C07C0069-732
	ICS	C11C0003-10; C07F0009-09; C07C0305-04; C10M0141-00; C09K0005-00; C07C0067-03
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	ECLA	C07C067/03+69/732; C07C305/06; C07F009/113+Q; C07F009/143+Q; C09K005/00; C10M101/04; C10M105/32; C10M109/00; C10M129/68; C10M159/08; C10M171/00R; C11C003/10
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	NCL	252/071.000; 252/072.000; 252/073.000; 252/075.000
	ECLA	C07C067/03+69/732
EP 1307422	IPCI	C07C0069-732 [ICM,7]; C11C0003-10 [ICS,7]; C11C0003-00

[ICS,7,C*]; C07F0009-09 [ICS,7]; C07F0009-00 [ICS,7,C*]; C07C0305-04 [ICS,7]; C07C0305-00 [ICS,7,C*]; C10M0141-00 [ICS,7]; C09K0005-00 [ICS,7]; C07C0067-03 [ICS,7]; C07C0067-00 [ICS,7,C*]; C07C0069-52 [ICS,7]; C07C0069-00 [ICS,7,C*]

IPCR C07C0067-00 [I,C*]; C07C0067-03 [I,A]; C07C0305-00 [I,C*]; C07C0305-06 [I,A]; C07F0009-00 [I,C*]; C07F0009-113 [I,A]; C07F0009-143 [I,A]; C09K0005-00 [I,A]; C09K0005-00 [I,C*]; C10M0101-00 [I,C*]; C10M0101-04 [I,A]; C10M0105-00 [I,C*]; C10M0105-32 [I,A]; C10M0109-00 [I,A]; C10M0109-00 [I,C*]; C10M0129-00 [I,C*]; C10M0129-68 [I,A]; C10M0159-00 [I,C*]; C10M0159-08 [I,A]; C10M0171-00 [I,A]; C10M0171-00 [I,C*]; C11C0003-00 [I,C*]; C11C0003-10 [I,A]

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OS MARPAT 136:153747

AB A composition, suitable for use as a lubricant, a heat transfer agent, a rheol. modifier, a corrosion inhibitor, or a moisture inhibitor, consists of the reaction products of the acid-catalyzed **transesterification** of a C8-22-fatty acid ester (preferably a C18-fatty acid ester) with a C1-18-alc., in which the acid portion (typically a **phosphate** or a sulfate) can be incorporated as the inorg. esters into a portion of the products. The preferred starting esters are derived from **ricinoleic acid**, oleic acid, linoleic acid, stearic acid, lauric acid, myristic acid, and palmitic acid (including dimerized and trimerized acids), especially when present in a vegetable oil (preferably castor oil (containing >80% **ricinoleic acid** esters)). **Transesterification** of castor oil with n-**propanol** in the presence of minor amts. of **phosphoric** acid yielded Pr ricinoleate, glycerol mono-, di-, and triricinoleates, glycerin, **propanol**, and various **phosphate** esters of the hydroxyacid reaction products. When used as a lubricant can contain an added miscibility-enhancement additive (e.g., C10-18-alcs., esters, etc.), to increase miscibility with other fluids (e.g., naphthenes, paraffins, polyol esters, polyalkylene glycols, etc.).

ST **transesterified** vegetable oil lubricant refrigerant heat transfer; glyceride **transesterification** lubricating oil refrigeration; castor oil **transesterification** compressor lubricating oil; **ricinoleic acid** **transesterification** compressor lubricating oil

IT Alcohols, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(C1-18, **transesterification** products with C8-22-glycerides; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Glycerides, uses
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(C18 and C18-unsatd., **transesterified**; **transesterified** C8-22-vegetable oils as refrigeration

lubricating oils and heat-transfer fluids)
IT Fatty acids, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(C18-unsatd., trimers, esters, **transesterification** products; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Glycerides, uses
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(C8-22, **transesterified**; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Sulfonic acids, uses
RL: CAT (Catalyst use); USES (Uses)
(arenesulfonic, **transesterification** catalyst; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Hydraulic fluids
(brake, heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Lubricating oils
(compressor, synthetic; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Lubricating oils
(cutting oils, heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Fatty acids, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(dimer acids, C18, esters, **transesterification** products; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Lactones
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(estolides, **transesterification** products; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Air conditioning
Antifreeze
Cooling apparatus
Dielectric liquids
(heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Brakes (mechanical)
Transmissions (mechanical)
(hydraulic, heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Alcohols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(long-chain, C10-18, miscibility enhancing agents; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
IT Naphthenes
Naphthenic oils
Paraffin oils

RL: MSC (Miscellaneous)
(miscibility enhancers for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Esters, uses
Quaternary ammonium compounds, uses
RL: MOA (Modifier or additive use); USES (Uses)
(miscibility enhancing agents; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT **Transesterification**
(of vegetable oils; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Hydrocarbon oils
Polyolefins
Polyoxyalkylenes, miscellaneous
RL: MSC (Miscellaneous)
(oils, miscibility enhancers for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Fatty acids, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(**phosphated, transesterification** products containing; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Alcohols, miscellaneous
RL: MSC (Miscellaneous)
(polyhydric, esters, oils, miscibility enhancers for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Alcohols, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polyhydric; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Refrigeration
(systems, heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Sulfonic acids, uses
RL: CAT (Catalyst use); USES (Uses)
(**transesterification** catalyst; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Corrosion inhibitors
Heat transfer agents
Refrigerants
Transesterification catalysts
(**transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Castor oil
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(**transesterified; transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Hydraulic fluids
(transmission, automatic, heat transfer agents for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT Ethers, miscellaneous

RL: MSC (Miscellaneous)
(vinyl, polymers, oils, miscibility enhancers for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT 71-43-2D, Benzene, alkyl derivs. 9003-29-6, Butene homopolymer
RL: MSC (Miscellaneous)
(oils, miscibility enhancers for; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT 64-18-6, Formic acid, uses 64-19-7, Acetic acid, uses 77-92-9, Citric acid, uses 79-14-1, Hydroxyacetic acid, uses 97-05-2, Sulfosalicylic acid 526-95-4, Gluconic acid 1333-39-7, Phenolsulfonic acid 5329-14-6, Sulfamic acid 7647-01-0, Hydrogen chloride, uses **7664-38-2**, **Phosphoric** acid, uses 7664-93-9, Sulfuric acid, uses 7697-37-2, Nitric acid, uses 7790-94-5, Chlorosulfonic acid **13598-36-2**, **Phosphonic** acid 27176-87-0, Dodecylbenzenesulfonic acid 29656-58-4, Benzoic acid, hydroxy-
RL: CAT (Catalyst use); USES (Uses)
(**transesterification** catalyst; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT 56-81-5P, Glycerol, uses **1323-38-2P**, Glycerol monoricinoleate 2540-54-7P, Glycerol triricinoleate **27902-24-5P**, Glycerol diricinoleate **58561-47-0P** 90593-61-6P
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(**transesterification** products containing; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT **71-23-8**, n-**Propanol**, uses **58561-47-0D**, **phosphated**
RL: NUU (Other use, unclassified); USES (Uses)
(**transesterification** products containing; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

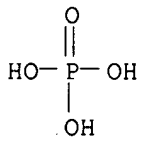
IT 57-10-3DP, Palmitic acid, esters, **transesterification** products with C1-18-alcs. 57-11-4DP, Stearic acid, esters, **transesterification** products with C1-18-alcs. 60-33-3DP, Linoleic acid, esters, **transesterification** products with C1-18-alcs. 112-80-1DP, Oleic acid, esters, **transesterification** products with C1-18-alcs. **141-22-0DP**, **Ricinoleic acid**, esters, **transesterification** products with C1-18-alcs. 143-07-7DP, Lauric acid, esters, **transesterification** products with C1-18-alcs. 544-63-8DP, Myristic acid, esters, **transesterification** products with C1-18-alcs.
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(**transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT 56-81-5DP, Glycerol, **transesterification** products with C8-22-glycerides 64-17-5DP, Ethanol, **transesterification** products with C8-22-glycerides 67-56-1DP, Methyl alcohol, **transesterification** products with C8-22-glycerides **67-63-0DP**, Isopropanol, **transesterification** products with C8-22-glycerides **71-23-8DP**, n-**Propanol**, **transesterification** products with C8-22-glycerides 71-36-3DP, Butyl alcohol, **transesterification** products with C8-22-glycerides 71-41-0DP, Pentyl alcohol, **transesterification** products with C8-22-glycerides, uses 111-27-3DP, Hexyl alcohol, **transesterification** products with C8-22-glycerides 111-70-6DP,

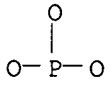
Heptyl alcohol, **transesterification** products with C8-22-glycerides 111-87-5DP, Octyl alcohol, **transesterification** products with C8-22-glycerides 112-30-1DP, Decyl alcohol, **transesterification** products with C8-22-glycerides 112-53-8DP, Dodecanol, **transesterification** products with C8-22-glycerides 143-08-8DP, Nonyl alcohol, **transesterification** products with C8-22-glycerides
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(**transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

IT **7664-38-2**, **Phosphoric** acid, uses **13598-36-2**, **Phosphonic** acid
RL: CAT (Catalyst use); USES (Uses)
(**transesterification** catalyst; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 13598-36-2 HCAPLUS
CN Phosphonic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

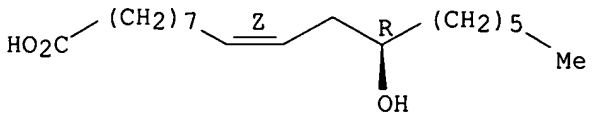
IT **1323-38-2P**, Glycerol monoricinoleate **27902-24-5P**, Glycerol diricinoleate **58561-47-0P**
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(**transesterification** products containing; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)

RN 1323-38-2 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, monoester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



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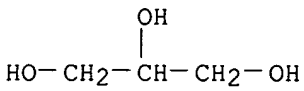
CRN 56-81-5
CMF C3 H8 O3

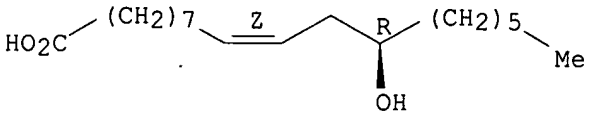


RN 27902-24-5 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, diester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

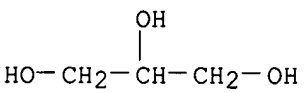
CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



CM 2

CRN 56-81-5
CMF C3 H8 O3

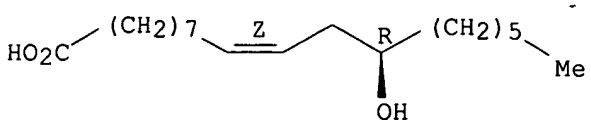


RN 58561-47-0 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, ester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

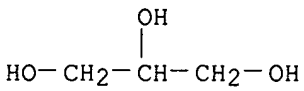
CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.

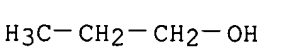


CM 2

CRN 56-81-5
CMF C3 H8 O3



IT **71-23-8**, n-**Propanol**, uses **58561-47-0D**, **phosphated**
RL: NUU (Other use, unclassified); USES (Uses)
(**transesterification** products containing; **transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
RN 71-23-8 HCAPLUS
CN 1-Propanol (9CI) (CA INDEX NAME)

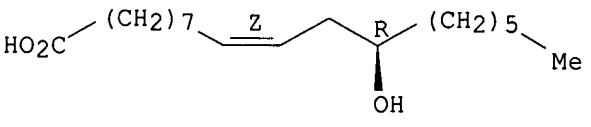


RN 58561-47-0 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, ester with 1,2,3-propanetriol (9CI) (CA INDEX NAME)

CM 1

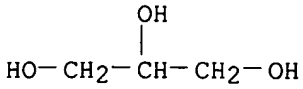
CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



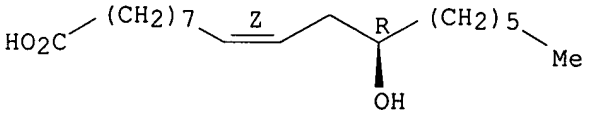
CM 2

CRN 56-81-5
CMF C3 H8 O3

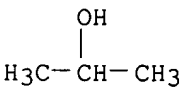


IT **141-22-0DP, Ricinoleic acid**, esters, **transesterification** products with C1-18-alcs.
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
(**transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
RN 141-22-0 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)- (9CI) (CA INDEX NAME)

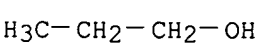
Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



IT **67-63-0DP**, Isopropanol, **transesterification** products with C8-22-glycerides **71-23-8DP**, n-**Propanol**, **transesterification** products with C8-22-glycerides
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(**transesterified** C8-22-vegetable oils as refrigeration lubricating oils and heat-transfer fluids)
RN 67-63-0 HCAPLUS
CN 2-Propanol (9CI) (CA INDEX NAME)



RN 71-23-8 HCAPLUS
CN 1-Propanol (9CI) (CA INDEX NAME)



L69 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:807504 HCAPLUS
DN 128:50492
ED Entered STN: 31 Dec 1997
TI Characteristic properties of water-soluble cutting fluid additives derived from **ricinoleic acid** oligomers and dimer acids
AU Watanabe, Shoji; Fujita, Tsutomu; Sakamoto, Masami
CS Dep. Applied Chem., Fac. Engineering, Chiba Univ., Chiba, 263, Japan
SO Kogakubu Kenkyu Hokoku (Chiba Daigaku) (1997), 49(1), 27-34
CODEN: CDKKAN; ISSN: 0577-6848
PB Chiba Daigaku Kogakubu
DT Journal

LA English
CC 51-8 (Fossil Fuels, Derivatives, and Related Products)
Section cross-reference(s): 35, 45
AB The preparation and properties of new types of cutting fluid additives mainly derived from **ricinoleic acid** oligomers and dimer acids (dimer and oligo-esters). Various esters of these higher fatty acids showed corrosion resistance and good lubricity for water-soluble cutting fluids. Anti-rust properties were improved by introduction of an ester group into a mol. of a higher fatty acid.
ST **ricinoleic acid** ester cutting fluid additive; anticorrosion cutting fluid ricinoleic ester; antirust cutting fluid ricinoleic ester; dimer acid **ricinoleic acid** cutting fluid
IT Lubricating oil additives
(corrosion inhibitors, cutting fluid; preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT Lubricating oil additives
Lubricating oil additives
(cutting oil additives, biocides; preparation and properties of water-soluble
cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT Lubricating oils
(cutting oils, water-based; preparation and properties of water-soluble cutting
fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT Fatty acids, uses
RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(hydroxy, esters, **ricinoleic acid** oligomers; preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT Polyesters, uses
RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(**ricinoleic acid** oligomers; preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT Lubricating oil additives
(rust inhibitors, cutting fluid; preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)
IT 64-17-5DP, Ethanol, monoesters with Haridimer 200K dimer acid, triethanolamine salts, uses 67-56-1DP, Methanol, monoesters with Haridimer 200K dimer acid, triethanolamine salts, uses **67-63-0DP**, Isopropanol, monoesters with Haridimer 200K dimer acid, triethanolamine salts **71-23-8DP**, 1-**Propanol**, monoesters with Haridimer 200K dimer acid, triethanolamine salts, uses 71-36-3DP, n-Butanol, monoesters with Haridimer 200K dimer acid, triethanolamine salts 100-37-8DP, monoesters with Haridimer 200K dimer acid, triethanolamine salts 100-51-6DP, Benzyl alcohol, monoesters with Haridimer 200K dimer acid, triethanolamine salts 102-71-6DP, salts with mono-C1-8-alkyl and alkoxy esters with Haridimer 200K dimer acid 104-76-7DP, monoesters with Haridimer 200K dimer acid, triethanolamine salts 110-80-5DP, 2-Ethoxyethyl alcohol, monoesters with Haridimer 200K dimer acid, triethanolamine salts 111-27-3DP, Hexyl alcohol, monoesters with Haridimer 200K dimer acid, triethanolamine salts 123-51-3DP, Isoamyl alcohol, monoesters with Haridimer 200K dimer acid, triethanolamine salts

141-22-0DP, Ricinoleic acid, esters
1069-92-7P, 12-Hydroxystearic acid, acetate 14936-79-9P
27925-02-6DP, Ricinoleic acid, homopolymer,
oligomeric, esters 45317-49-5P 71294-52-5P 78678-64-5P 95356-34-6P
95356-40-4P 95376-51-5P 135250-27-0P 135250-28-1P 158727-61-8P
158727-63-0P 158727-65-2P 158727-69-6P 158727-71-0P 158727-73-2P
158727-75-4P 158727-79-8P 158727-81-2P 158727-83-4P 158727-85-6P
158727-87-8P 158727-89-0P 158727-95-8P 158727-97-0P 158727-99-2P
158728-01-9P 158728-03-1P 158728-05-3P 158728-07-5P 158728-09-7P
158728-11-1P 158728-13-3P 158728-15-5P 158728-17-7P 158728-21-3P
173555-08-3P 173792-11-5P **175386-72-8DP**, Haridimer 200K,
mono-C1-8-alkyl and alkoxy esters 199938-98-2P 199939-03-2P
199939-04-3P 199939-05-4P
RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD

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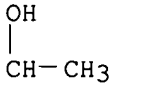
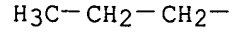
IT **67-63-0DP**, Isopropanol, monoesters with Haridimer 200K dimer acid, triethanolamine salts **71-23-8DP**, 1-**Propanol**, monoesters with Haridimer 200K dimer acid, triethanolamine salts, uses **141-22-0DP**, **Ricinoleic acid**, esters **27925-02-6DP**, **Ricinoleic acid**, homopolymer, oligomeric, esters **175386-72-8DP**, Haridimer 200K, mono-C1-8-alkyl and alkoxy esters
RL: MOA (Modifier or additive use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and properties of water-soluble cutting fluid multifunctional additives derived from **ricinoleic acid** oligomers and dimers)

RN 67-63-0 HCAPLUS
CN 2-Propanol (9CI) (CA INDEX NAME)

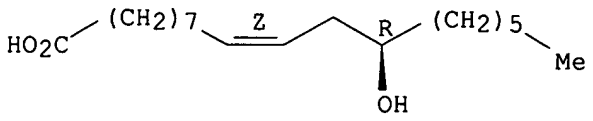


RN 71-23-8 HCAPLUS
CN 1-Propanol (9CI) (CA INDEX NAME)



RN 141-22-0 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.

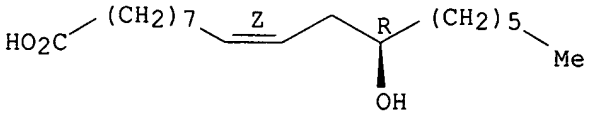


RN 27925-02-6 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



RN 175386-72-8 HCAPLUS
CN Haridimer 200K (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

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http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
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L91 ANSWER 1 OF 1 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN **2002-188714** [24] WPIX
DNC C2002-058375

TI Lubricant composition for, e.g. mechanical device, comprises trans esterified fatty acid ester which is reaction product of fatty acid ester with alcohol in the presence of acid.

DC E19 G04 J07 J08 Q75

IN DUFFY, B J; MOSIER, B

PA (DUFF-I) DUFFY B J; (MOSI-I) MOSIER B; (MJRE-N) MJ RES & DEV LP

CYC 98

PI WO 2002010114 A2 20020207 (200224)* EN 49 C07C069-732
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
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US 2002017629 A1 20020214 (200224) C09K005-00 <--
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EP 1307422 A2 20030507 (200332) EN C07C069-732
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AU 2001281027 A8 20050908 (200568) C07C069-732
TW 225858 B1 20050101 (200619) C07C069-732

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FDT AU 2001081027 A Based on WO 2002010114; EP 1307422 A2 Based on WO 2002010114; MX 2003000964 A1 Based on WO 2002010114; AU 2001281027 A8 Based on WO 2002010114

PRAI US 2000-222477P 20000802; US 2001-921238 20010802

IC ICM C07C069-732; C07C305-04; **C09K005-00**
ICS **C07C067-03**; C07C069-52; **C07F009-09**; **C10M141-00**; **C11C003-10**; F25D001-00

AB WO 200210114 A UPAB: 20020416
NOVELTY - A lubricant composition comprises a transesterified fatty acid ester which is a product of the reaction of a fatty acid ester having 8-22 carbon atoms, in the presence of an acid, with an alcohol.

USE - The composition can be used as a lubricant for a mechanical device, a refrigeration system, a motor oil system, an engine, an engine part, a gear, a drilling operation engine, or a reciprocating combustion engine. It can also used as a heat transfer fluid for a coolant system, a hydraulic braking system, a hydraulic transmission system, a refrigeration system, or an air-conditioning system. It can also be used as a rheological modifier for functional fluids, e.g. radiator fluid, drilling fluid, engine fluid, anti-corrosive fluid, transmission fluid, hydraulic fluid, brake fluid, dielectric fluid, heat transfer fluid, or cutting fluid. It can also be used as a corrosion inhibitor, a moisture inhibitor or a cleaner for a combustion engine, a hydraulic braking system, a hydraulic transmission system, or a coolant system (all claimed). it can also be used as an additive to existing lubricants, heat transfer fluids, rheological modifiers, corrosion inhibitors, moisture inhibitors, and cleaners.

ADVANTAGE - The composition is stable at up to 350 deg. C and also at below 0 deg. C. It provides reduced coefficient of friction and wear and prevents galling and seizing. It is biodegradable and non-toxic in nature, and has reduced flammability. It exhibits good sealing of metal joints even under high pressure and dynamic conditions. It also lowers the pour point/freezing point of paraffinic oils such that wax crystallization and

film formation at low temperatures are prevented. it reduces oxidation, prevents sludge formation, inhibits corrosion and modifies viscosity. It is compatible with elastomers and improves elastomeric properties of, e.g. gaskets and seals.
Dwg.0/0

FS CPI GMPI

FA AB; DCN

MC CPI: E05-G09D; E10-A09B7; E10-E04C2; E10-E04D2; E10-G02A2; E31-B03D; E31-F05; E31-H05; E31-K05A; E31-K07; G04-B01; J07-A09; J08-D06; N04-A; N04-B; N04-C; N04-D; N05-E02

TECH UPTX: 20020416

TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Reactants: The fatty acid ester is a vegetable oil, **ricinoleic acid**, oleic acid, linoleic acid, stearic acid, lauric acid, myristic acid, palmitic acid, or a dimerized or a trimerized fatty acid ester.
Preferred vegetable oil is castor oil comprising at least 80% **ricinoleic acid**.
The alcohol is a 1-18C alcohol, preferably methyl alcohol, ethyl alcohol, butyl alcohol, pentyl alcohol, hexyl alcohol, heptyl alcohol, octyl alcohol, nonyl alcohol, decyl alcohol, dodecanol, isopropyl alcohol, n-**propyl alcohol**, glycerol, substituted alcohol, or multiple hydroxy functional group alcohol.
The acid can be acetic acid or an organic sulfonic acid, preferably dodecylbenzene sulfonic acid or phenol sulfonic acid.
Preferred Concentrations: The fatty acid ester, the alcohol and the acid are present in the reaction mixture in concentrations of 25-36 mol %, 58-62 mol % and 8-10 mol %, respectively.
Preferred Components: The transesterified fatty acid ester is of formula HOOC(CH2)x(CHO(Ac))z(CH2)y.
Ac = acid functional group;
x+y = 10-20;and
z = 1 or 2.
The transesterified fatty acid ester can be ricinoleic n-propyl ester, an ester of **ricinoleic acid** and glycerol, a phosphated fatty acid ester, glycerol ricinoleate, or n-propyl ricinoleate.
Further, the composition comprises an estolide functional group, and 0.1-10 wt.%, preferably 1-5 wt.%, of a miscibility-enhancement additive to increase miscibility with naphthenes, paraffins, alkyl benzenes, mineral oils, polyol esters, poly-alpha-olefins, polyalkylene glycols, polybutenes, polyvinyl ethers, and substituted hydrocarbons.
Preferred miscibility-enhancement additive is a 10-18C long chain alcohol, ester, quaternary ammonium salt or alkyl benzene.
The transesterified fatty acid ester is further reacted with a second compound having an acetyl, alkyl (prop)oxy or carboxyl functional group to form a further-substituted fatty acid ester.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Reactant: The acid can be phosphoric acid, muriatic acid, nitric acid, phosphonic acid, phosphorus acid, chlorosulfonic acid, sulfuric acid, or sulfosalicylic acid.

ABEX UPTX: 20020416

EXAMPLE - United States Pharmacopeia grade castor oil (2 parts) was combined with 99.9% n-**propyl alcohol** (1 part), and phosphoric acid (0.3-0.35% wt/wt) was added to the castor oil portion of the mixture. The components were boiled at 210 degreesF until approximately 235-240 degreesC was reached, then cooled to room temperature. Heat transfers were conducted on copper coils, which first used a typical mineral oil composition and compared with mineral oils containing 10 wt.% of an n-propyl ester of castor oil (NPEC), at 212 degreesF. When the temperature profile was measured along the coils, the

NPEC was found to have a marked effect on the thermal conductivity of the lubricant oil system. Refrigeration studies showed that addition of NPEC to existing mineral oil-based and polyol ester-based systems improved the overall efficiency and energy efficiency rating by 9-11%. The coefficient of performance was observed to increase from 10.54 to 11.69, as well as the condensate production from 15% to 20%.

=> => fil dpci
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FILE LAST UPDATED: 14 AUG 2006 <20060814/UP>
PATENTS CITATION INDEX, COVERS 1973 TO DATE

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http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

=> d all

L92 ANSWER 1 OF 1 DPCI COPYRIGHT 2006 THE THOMSON CORP on STN
AN 2002-188714 [24] DPCI
DNC C2002-058375
TI Lubricant composition for, e.g. mechanical device, comprises trans esterified fatty acid ester which is reaction product of fatty acid ester with alcohol in the presence of acid.
DC E19 G04 J07 J08 Q75
IN DUFFY, B J; MOSIER, B
PA (DUFF-I) DUFFY B J; (MOSI-I) MOSIER B; (MJRE-N) MJ RES & DEV LP
CYC 98
PI WO 2002010114 A2 20020207 (200224)* EN 49 C07C069-732
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
US 2002017629 A1 20020214 (200224) C09K005-00 <--
AU 2001081027 A 20020213 (200238) C07C069-732
EP 1307422 A2 20030507 (200332) EN C07C069-732
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
MX 2003000964 A1 20040201 (200473) C07C305-04
AU 2001281027 A8 20050908 (200568) C07C069-732
TW 225858 B1 20050101 (200619) C07C069-732
ADT WO 2002010114 A2 **WO 2001-US24369 20010802**; US 2002017629 A1 **Provisional US 2000-222477P 20000802, US 2001-921238 20010802**; AU 2001081027 A AU 2001-81027 20010802; EP 1307422 A2 EP 2001-959474 20010802, **WO 2001-US24369 20010802**; MX 2003000964 A1 **WO 2001-US24369 20010802**, MX 2003-964 20030131; AU 2001281027 A8 AU 2001-281027 20010802; TW 225858 B1 TW 2001-118924 20010802
FDT AU 2001081027 A Based on WO 2002010114; EP 1307422 A2 Based on WO 2002010114; MX 2003000964 A1 Based on WO 2002010114; AU 2001281027 A8 Based on WO 2002010114
PRAI **US 2000-222477P 20000802; US 2001-921238 20010802**
IC ICM C07C069-732; C07C305-04; C09K005-00

ICS C07C067-03; C07C069-52; C07F009-09; C10M141-00; C11C003-10; F25D001-00
FS CPI GMPI

EXF EXAMINER'S FIELD OF SEARCH UPE: 20050124

CTCS CITATION COUNTERS

PNC.DI	0	Cited Patents Count (by inventor)
PNC.DX	14	Cited Patents Count (by examiner)
IAC.DI	0	Cited Issuing Authority Count (by inventor)
IAC.DX	5	Cited Issuing Authority Count (by examiner)
PNC.GI	0	Citing Patents Count (by inventor)
PNC.GX	0	Citing Patents Count (by examiner)
IAC.GI	0	Citing Issuing Authority Count (by inventor)
IAC.GX	0	Citing Issuing Authority Count (by examiner)
CRC.I	0	Cited Literature References Count (by inventor)
CRC.X	6	Cited Literature References Count (by examiner)
OSC.D	9	Cited Patent WPI Accession Number Count
OSC.G	0	Citing Patent WPI Accession Number Count

CDP CITED PATENTS UPD: 20050124

Cited by Examiner

CITING PATENT	CAT	CITED PATENT	ACCNO
EP 1307422	A	No Citations	
WO 200210114	A X	EP 967197	A1 2000-055702/05
	PA:	(TOUL-N) TOULOUSAINE RECH & DEV TRD; (TRDT-N) TRD TOULOUSAINE RECH & DEV SA	
	IN:	GASET, A; LACAZE-DUFAURE, C; MOULOUNGUI, Z; RIGAL, L; GASET, A E; LACAZE, D C	
	X	FR 2374290	A 1978-67432A/38
	PA:	(STEA-N) STEARINERIES DUBOIS;	
	IN:	AUBE, G; DEFEZ, D	
	Y	GB 457548	A
	X	GB 563481	A
	X	GB 591421	A
	X	US 1822977	A
	X	US 3524751	A 1970-64385R/36
	PA:	(SMI -I) SMITH MK	
	X	US 4101432	A 1978-72168A/40
	PA:	(MOBI) MOBIL OIL CORP	
	IN:	OKORODUDU, A O M	
	A	US 4152915	A 1978-91478A/51
	PA:	(AQUI-N) AQUILA SPA	
	X	US 6018063	A 1999-357617/30
	PA:	(LAMB-N) LAMBENT TECHNOLOGIES INC; (USDA) US DEPT OF AGRICULTURE; (USDA) US SEC OF AGRIC	
	IN:	ABBOTT, T P; ASADAUSKAS, S; ISBELL, T A; LOHR, J E	
	X	WO 9015127	A 1991-007200/01
	PA:	(AGSE-N) AG-SEED PTY LTD	

IN: PHILPOTT, A K; RAE, I D
X WO 9222627 A 1993-018118/02
PA: (HENK) HENKEL HAKUSUI KK; (HENK) HENKEL KGAA
IN: KAWAHARA, Y; NAKASHIMA, A; TOTANI, N
X WO 9222631 A 1993-018120/02
PA: (BEKU-N) BEKU ENVIRONMENTAL PROD LTD
IN: KUTZNER, B
WO 200210114 A2 X EP 967197 A 2000-055702/05
PA: (TOUL-N) TOULOUSAINE RECH & DEV TRD; (TRDT-N) TRD TOULOUSAINE RECH & DEV SA
IN: GASET, A; LACAZE-DUFAURE, C; MOULOUNGUI, Z; RIGAL, L; GASET, A E; LACAZE, D C
X FR 2374290 A 1978-67432A/38
PA: (STEA-N) STEARINERIES DUBOIS;
IN: AUBE, G; DEFEZ, D
Y GB 457548 A
X GB 563481 A
X GB 591421 A
X US 1822977 A
X US 3524751 A 1970-64385R/36
PA: (SMI -I) SMITH MK
X US 4101432 A 1978-72168A/40
PA: (MOBI) MOBIL OIL CORP
IN: OKORODUDU, A O M
A US 4152915 A 1978-91478A/51
PA: (AQUI-N) AQUILA SPA
X US 6018063 A 1999-357617/30
PA: (LAMB-N) LAMBENT TECHNOLOGIES INC; (USDA) US DEPT OF AGRICULTURE; (USDA) US SEC OF AGRIC
IN: ABBOTT, T P; ASADAUSKAS, S; ISBELL, T A; LOHR, J E
X WO 9015127 A 1991-007200/01
PA: (AGSE-N) AG-SEED PTY LTD
IN: PHILPOTT, A K; RAE, I D
X WO 9222627 A 1993-018118/02
PA: (HENK) HENKEL HAKUSUI KK; (HENK) HENKEL KGAA
IN: KAWAHARA, Y; NAKASHIMA, A; TOTANI, N
X WO 9222631 A 1993-018120/02
PA: (BEKU-N) BEKU ENVIRONMENTAL PROD LTD
IN: KUTZNER, B

REN LITERATURE CITATIONS UPR: 20050124

Citations by Examiner

CITING PATENT	CAT	CITED LITERATURE
EP 1307422	A	See references of WO 0210114A3
WO 200210114	A	HELLER ET AL.: COMPTES RENDUS HEBDOMADAIRES DES SEANCES DE L'ACADEMIE DES SCIENCES, 1907, pages 462-466, XP008001292 GAUTHIER-VILLARS, PARIS., FR ISSN: 0009-2940
WO 200210114	A	M. J. DIAMOND ET AL.: "Preparation of Phosphorus Esters of Long-Chain Hydroxy Fatty Acids" JOURNAL OF THE AMERICAN OIL CHEMISTS' SOCIETY., vol. 41, 1964, pages 9-13, XP001053663 AMERICAN OIL CHEMISTS' SOCIETY. CHAMPAIGN., US ISSN: 0003-021X
WO 200210114	A2 X	HELLER ET AL.: COMPTES RENDUS HEBDOMADAIRES DES SEANCES DE L'ACADEMIE DES SCIENCES, 1907, pages

462-466, XP008001292 GAUTHIER-VILLARS, PARIS., FR ISSN: 0009-2940

WO 200210114 A2 X M. J. DIAMOND ET AL.: "Preparation of Phosphorus Esters of Long-Chain Hydroxy Fatty Acids" JOURNAL OF THE AMERICAN OIL CHEMISTS' SOCIETY., vol. 41, 1964, pages 9-13, XP001053663 AMERICAN OIL CHEMISTS' SOCIETY. CHAMPAIGN., US ISSN: 0003-021X

WO 200210114 A2 See also references of EP 1307422A2

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FILE COVERS 1907 - 24 Aug 2006 VOL 145 ISS 9
FILE LAST UPDATED: 22 Aug 2006 (20060822/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitstr retable tot l104

L104 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:830902 HCAPLUS
DN 135:360064
TI Biodegradable oleic estolide ester having saturated fatty acid end group useful as lubricant base stock
IN Cermak, Steven C.; Isbell, Terry A.
PA The United States of America as Represented by the Secretary of Agriculture, USA
SO U.S., 8 pp., Cont.-in-part of U.S. 6,018,063.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6316649	B1	20011113	US 2000-490360	20000124
	US 6018063	A	20000125	US 1998-191907	19981113 <--
	WO 2001053247	A1	20010726	WO 2001-US2248	20010124

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	AU 2001032929	A5	20010731	AU 2001-32929	20010124
PRAI	US 1998-191907	A2	19981113		
	US 2000-490360	A	20000124		
	WO 2001-US2248	W	20010124		

OS MARPAT 135:360064

AB Esters of estolides derived from oleic acids and C6-14 saturated fatty acids are characterized by superior properties for use as lubricant base stocks. These estolides may also be used as lubricants without the need for fortifying additives normally required to improve the lubricating properties of base stocks.

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Burg	1995			US 5380894	HCAPLUS
Ciaudelli	1986			US 4567037	HCAPLUS
Ciaudelli	1987			US 4639369	HCAPLUS
Duncan	1997			US 5658863	HCAPLUS
Isbell	2000			US 6018063	HCAPLUS
Kusakawa	1993			US 5204375	HCAPLUS
Kusakawa, T	2000			SciFindersearch	
Selim, M	1997	74	249	JAOCS	
Terry, A	1994	71	169	JAOCS	
Terry, A	1994	71	379	JAOCS	
Terry, A	1997	74	473	JAOCS	
Zoleski	1984			US 4428850	HCAPLUS

L104 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:819043 HCAPLUS

DN 132:51416

TI Preparation of alkyl esters by transesterification or alcoholysis

IN Mouloungui, Zephirin; Lacaze-Dufaure, Corinne; Gaset, Antoine; Rigal, Luc

PA Toulousaine de Recherche et de Developpement "T.R.D.", Fr.

SO Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW

DT Patent

LA French

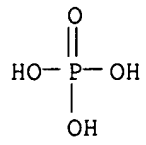
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 967197	A1	19991229	EP 1999-390011	19990621 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	FR 2780399	A1	19991231	FR 1998-8062	19980625
	FR 2780399	B1	20000915		
PRAI	FR 1998-8062	A	19980625		

AB A desired alkyl ester is prepared by transesterification of a different alkyl ester with the appropriate alc. in a hydrophilic/hydrophobic mixed medium at 50-250° in the presence of a catalyst consisting of H3PO4 or its salt, after which the hydrophobic phase is separated and the 2 esters therein subsequently separated Thus, sunflower oil was heated to 130° with 3 times the stoichiometric amount of 2-ethylhexanol in the presence of 85% H3PO4 and stirred at 250 rpm to give a fine emulsion, then cooled and decanted. The yield of 2-ethylhexyl esters (mostly oleate) was 98% and the selectivity 100%.

IT **7664-38-2**, Phosphoric acid, uses
RL: CAT (Catalyst use); USES (Uses)

(preparation of alkyl esters by transesterification)
RN 7664-38-2 HCAPLUS
CN Phosphoric acid (7CI, 8CI, 9CI) (CA INDEX NAME)



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Hugh, J	1963			US 3098093 A	HCAPLUS
The Procter & Gamble Co	1996			WO 9640701 A	HCAPLUS

L104 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:350731 HCAPLUS
DN 130:354576
TI Biodegradable oleic estolide ester base stocks and lubricants
IN Isbell, Terry A.; Abbott, Thomas P.; Asadauskas, Svajus; Lohr, Joseph E., Jr.
PA United States Dept. of Agriculture, USA; Lambent Technologies, Inc.
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9925794	A1	19990527	WO 1998-US24469	19981116
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 6018063	A	20000125	US 1998-191907	19981113 <--
	CA 2309914	AA	19990527	CA 1998-2309914	19981116
	AU 9914613	A1	19990607	AU 1999-14613	19981116
	EP 1051465	A1	20001115	EP 1998-958608	19981116
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1997-65726P	P	19971114		
	US 1998-191907	A	19981113		
	WO 1998-US24469	W	19981116		

OS MARPAT 130:354576
AB Esters of estolides derived from oleic acids are characterized by superior properties for use as lubricant base stocks. These estolides may also be used as lubricants without the need for fortifying additives normally required to improve the lubricating properties of base stocks.
RETABLE

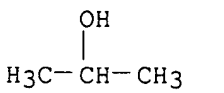
Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File

Burdzy	1996		US 5518728 A	HCAPLUS
Ciaudelli	1986		US 4567037 A	HCAPLUS
Ciaudelli	1987		US 4639369 A	HCAPLUS
Giodner	1984		US 4431673 A	HCAPLUS
Kellet	1989		US 4806572 A	HCAPLUS
Zoleski	1984		US 4428850 A	HCAPLUS

L104 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:520031 HCAPLUS
DN 119:120031
TI Degreaser composition comprising monounsaturated wax ester especially from fish oil
IN Kutzner, Bernd
PA Beku Environmental Products Ltd., Australia
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9222631	A1	19921223	WO 1992-AU262	19920605 <--
	W: CA, FI, JP, KR, MG, NO, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	AU 9218105	A1	19921217	AU 1992-18105	19920609
	AU 666849	B2	19960229		
PRAI	AU 1991-6646	A	19910611		

AB The title composition comprises ≥1 emulsifier and a wax ester comprising a fish oil extracted from orange roughy or dory and transesterified with an alc. such as EtOH or Me2CHOH in the presence of an acid catalyst. The composition is biodegradable and is not toxic, flammable, or corrosive.
IT **67-63-0D**, Isopropyl alcohol, transesterification products with fish oils
RL: USES (Uses)
(degreasing compns. containing)
RN 67-63-0 HCAPLUS
CN 2-Propanol (9CI) (CA INDEX NAME)



L104 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:475067 HCAPLUS
DN 119:75067
TI Fatty acid glycerol esters having improved rheological properties for use as lubricants
IN Nakashima, Akira; Totani, Nagao; Kawahara, Yoshio
PA Henkel K.-G.a.A., Germany
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9222627	A1	19921223	WO 1992-EP1227	19920603 <--

W: JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE

	JP 04363351	A2	19921216	JP 1991-139023	19910611
PRAI	JP 1991-139023	A	19910611		

OS MARPAT 119:75067

AB Simultaneous esterification and transesterification of a mixture of glycerol, branched C16-22 fatty acids containing 0-3 double bonds, and triglycerides of C6-24 fatty acids containing 0-5 double bonds give glycerides having good rheol. properties for use in the preparation of lubricants for metalworking, textiles, plastics, etc.

L104 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1991:124899 HCAPLUS
DN 114:124899
TI Transesterification manufacture of artificial jojoba oil
IN Rae, Ian David; Philpott, Arthur Keith
PA Ag-Seed Pty. Ltd., Australia
SO PCT Int. Appl., 17 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI WO 9015127	A1	19901213	WO 1990-AU253	19900608	<--
W: AU, CA, HU, JP, KR, SU, US					
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE					
AU 9058115	A1	19910107	AU 1990-58115	19900608	
PRAI AU 1989-4660	A	19890609			
AU 1989-6195	A	19890906			
WO 1990-AU253	A	19900608			

AB Artificial jojoba oil is prepared by transesterifying erucic acid with 2-octyldodecanol in the presence of H2SO4 catalyst.

L104 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:443376 HCAPLUS
DN 91:43376
TI Lubricant products in the working of metals
PA Aquila S.p.A., Italy
SO Neth. Appl., 17 pp.
CODEN: NAXXAN
DT Patent
LA Dutch
FAN.CNT 2

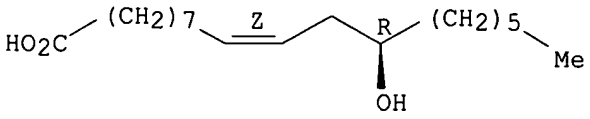
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI NL 7806555	A	19781219	NL 1978-6555	19780616	
FR 2394566	A1	19790112	FR 1978-15027	19780522	
FR 2394566	B1	19830121			
SE 7806379	A	19781218	SE 1978-6379	19780531	
BE 868097	A1	19781214	BE 1978-188547	19780614	
US 4152915	A	19790508	US 1978-916046	19780614	<--
CH 633311	A	19821130	CH 1978-6593	19780616	
GB 2000804	A	19790117	GB 1978-27325	19780619	
GB 2000804	B2	19820210			
PRAI IT 1977-24828	A	19770617			

AB Products forming basic solns., and useful as biodegradable lubricants in mech. working of metals, are obtained from alkali, amine, and/or ammonium salts (and optionally a phosphoric acid ester) of a polycondensate of ≥1 hydroxy fatty acids with C10-22 chains, containing Cl. The products

are prepared by polycondensation of a hydroxy fatty acid, such as **ricinoleic acid** [141-22-0]; chlorination of the polycondensate; and formation of salts of the chlorinated composition (e.g., with triethanolamine). The remaining acid functions may be esterified by an alc. with the aid of P2O5 or H3PO4. The products may be mixed with anti-foaming, bactericide, anti-corrosion, colorant, and perfume additives.

IT **141-22-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(polycondensation of, with chlorination, salt lubricants from, for metal working)
RN 141-22-0 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



L104 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:207030 HCAPLUS
DN 90:207030
TI Raw materials for aqueous liquids for metalworking
IN Bussi, Giancarlo; Baradel, Pier Paolo
PA Aquila S.p.A., Italy
SO Ger. Offen., 24 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	DE 2826561	A1	19790104	DE 1978-2826561	19780616	
	FR 2394566	A1	19790112	FR 1978-15027	19780522	
	FR 2394566	B1	19830121			
	SE 7806379	A	19781218	SE 1978-6379	19780531	
	BE 868097	A1	19781214	BE 1978-188547	19780614	
	US 4152915	A	19790508	US 1978-916046	19780614	<--
	CH 633311	A	19821130	CH 1978-6593	19780616	
	GB 2000804	A	19790117	GB 1978-27325	19780619	
	GB 2000804	B2	19820210			
PRAI	IT 1977-24828	A	19770617			

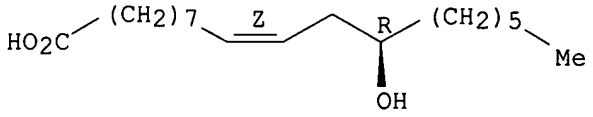
AB Metalworking fluids with good lubricity are prepared from alkali or amine salts or mineral acid esters of condensates of halogenated, hydroxylated, C10-22 fatty acids. Thus, heating **ricinoleic acid** with 0.3-2.5% p-MeC6H4SO3H in C6H6 at 80° with H2O distillation and chlorinating this product in solution gives a product with acid number 63 and Cl content 15.0%. An aqueous solution of 0.5% this product and 0.75% triethanolamine has solubility (0 insol., 3 completely soluble) 1-2, foaming (VV-C 846a, 0 = foaming in 15 min, 2 = no foam in 15 s) 1, corrosion inhibition (IP-25) 0/0-0, and load wear index (ASTM D 2783) 50, compared with 3, 0, 1/0-0, and 55, resp., for a condensate of 8,9-dichloro-12-hydroxyoctadecanoic acid.

IT **27925-02-6D**, chlorinated **70322-19-9D**, chlorinated
RL: USES (Uses)
(oligomeric, lubricants for metalworking, with improved lubricity)
RN 27925-02-6 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, (9Z,12R)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 141-22-0
CMF C18 H34 O3

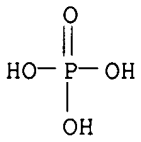
Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



RN 70322-19-9 HCAPLUS
CN 9-Octadecenoic acid, 12-hydroxy-, [R-(Z)]-, homopolymer, phosphate (9CI) (CA INDEX NAME)

CM 1

CRN 7664-38-2
CMF H3 O4 P



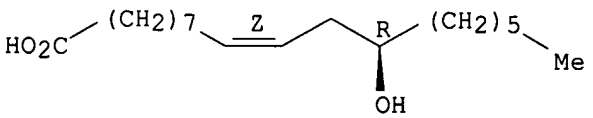
CM 2

CRN 27925-02-6
CMF (C18 H34 O3)x
CCI PMS

CM 3

CRN 141-22-0
CMF C18 H34 O3

Absolute stereochemistry. Rotation (-).
Double bond geometry as shown.



L104 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:168081 HCAPLUS
DN 90:168081
TI Alkyl acyloxystearates and their pharmaceutical use
IN Aube, Gerard; Defez, Daniel
PA Stearinerie Dubois Fils S. A., Fr.
SO Fr. Demande, 7 pp.
CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2374290	A1	19780713	FR 1976-37925	19761216 <--
	FR 2374290	B1	19800912		
PRAI	FR 1976-37925	A	19761216		

OS MARPAT 90:168081
AB Transesterification of triglycerides of Me(CH2)nCH(OH)(CH2)15-nCO2H (n = 5, 6, 7, 8) by ROH (R = C6-15 alkyl) and subsequent O-acylation of the products gave the resp. Me(CH2)nCH(O2CR1)(CH2)15-nCO2R (R1 = C1-3 alkyl), useful as a protective agent in pharmacol. compns.

L104 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1979:57705 HCAPLUS
DN 90:57705
TI Lubricant compositions containing organophosphorus derivatives of hydroxycarboxylic acids
IN Okorodudu, Abraham O. M.
PA Mobil Oil Corp., USA
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4101432	A	19780718	US 1977-815630	19770714 <--
PRAI	US 1977-815630	A	19770714		

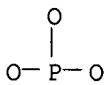
AB The preparation and use of organophosphorus derivs. of hydroxycarboxylic acids as load-carrying additives for lubricating oils or greases are described. Thus, 3 mol lactic acid [50-21-5] in C6H6 was refluxed with octadecyl phosphorodichloridite [68896-04-8] for 2 h to give bis(1-carboxyethyl)octadecyl phosphite [68896-05-9]. When 1 weight% of this additive was used in mineral oil, the scar diameter (mm) at 200°F and 2000 rpm was only 0.70 vs. 2.23 without the additive.

L104 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1970:512317 HCAPLUS
DN 73:112317
TI Compositions comprising castor oil and butyl acetyl ricinoleate, used as parting material in the casting of aluminum and its alloys
IN Smith, Malcolm Kent; Vignolo, Robert L.
SO U.S., 2 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3524751	A	19700818	US 1967-644082	19670607 <--

PRAI US 1967-644082 A 19670607
AB Effective parting agents, for casting Al and its alloys, showing low polymerization in use but separating readily from H2O, contain 60-80 weight % castor oil (I) and 40-20 weight % of a lower alkyl ester of an acetylated C8-22 hydroxy fatty acid. Thus, 25 weight parts butyl acetylricinoleate and 75 weight parts I had lower viscosity and H2O sensitivity than I with a min. of varnish deposit.

L104 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1964:45332 HCAPLUS
DN 60:45332
OREF 60:7908e-f
TI Preparation of phosphorus esters of long-chain hydroxy fatty acids
AU **Diamond, M. J.**; Applewhite, T. H.; Knowles, R. E.; Goldblatt, L. A.
CS Western Regional Res. Lab., Albany, CA
SO Journal of the American Oil Chemists' Society (**1964**), **41** (1), **9**-13
CODEN: JAOCA7; ISSN: 0003-021X
DT Journal
LA Unavailable
AB Several procedures are evaluated for the synthesis of P-containing derivs. of some long-chain hydroxy fatty acids, including ricinoleic and lesquerolic acid and their hydrogenated products. The conventional method of preparing phosphate esters by reaction of an alc. with a dialkyl phosphorochloridate is unsatisfactory, but the preparation was accomplished by using HCONMe2 as catalyst. P derivs. are obtained more conveniently by ester interchange between a long-chain hydroxy compound and a low-mol.-weight dialkyl phosphite. The phosphite esters were purified by partitioning between MeCN and petr. ether and also by chromatography on a column of silicic acid. Attempts to prepare P derivs. of the allylic hydroxyl of Me dimorphecolate resulted in extensive dehydration to the conjugated triene.
IT **13598-36-2**, Phosphonic acid
(esters, with hydroxy long-chain fatty acid esters)
RN 13598-36-2 HCAPLUS
CN Phosphonic acid (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



ONE OR MORE TAUTOMERIC DOUBLE BONDS NOT DISPLAYED IN THE STRUCTURE

L104 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1948:8805 HCAPLUS
DN 42:8805
OREF 42:1962b-c
TI Improvements in treatment and production of esters
IN Rowe, Richard
PA Victor Wolf, Ltd.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 591421		19470818	GB 1945-6458	19450315 <--

AB The necessity of separately generating HCl (gas) for esterification may be avoided by forming HCl (or HBr) within the reaction mixture, using, e.g.,

MgCl2, CaCl2, NaBr, or SrBr2, and concentrated H2SO4, so as to yield HX amounting to 1-2% of the reaction mixture It is desirable that the halide salt be soluble in the mixture (or a part of it) and that the salt formed (e.g., a sulfate or phosphate) be insol. The ester may be isolated by washing with water, followed by the usual treatment.

L104 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1946:13979 HCAPLUS
DN 40:13979
OREF 40:2658a-b
TI Alcoholysis of oils
IN Rosenbusch, Richard
PA Victor Wolf Ltd.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 563481		19440816	GB 1943-511	19430111 <--

AB Natural oils are treated at room temperature in the presence of HCl with 1.5-3 equivs. of an alc. having less than 6 C atoms.

L104 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1932:2797 HCAPLUS
DN 26:2797
OREF 26:328g-i
TI Fatty acid derivatives such as wetting agents
IN Munz, Ferdinand
PA General Aniline Works
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 1822977		19310915	US 1930-423881	19300127 <--

AB In forming products such as alkylated sulfated derivs., an alkylating or arylating agent such as Et2SO4 or benzyl chloride is caused to act on the Na salt of sulfated oleic or **ricinoleic acid** or other water-soluble salt of the sulfuric acid ester of a higher aliphatic acid containing at least 8 C atoms. U. S. 1,822,978 relates to a process of forming products as by acting with a lower monohydroxy aliphatic alc. such as MeOH or EtOH on a water-soluble salt of the sulfuric acid ester of an aliphatic acid containing at least 8 C atoms, such as that derived from hydroxystearic acid. U. S. 1,822,979 relates to reaction of a sulfonating agent such as chlorosulfonic acid and a lower mono-hydroxy aliphatic alc. such as iso-**Pr alc**. or BuOH on an unsatd. fat containing 18 or more C atoms in its mol. as in the production of derivs. of castor oil.

=> d his

(FILE 'HOME' ENTERED AT 07:12:37 ON 24 AUG 2006)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 07:12:51 ON 24 AUG 2006
L1 1 S US20020017629/PN OR (US2001-921238# OR WO2001-US24369 OR US20
E MOSIER/AU
L2 39 S E10-E12
E DURRY/AU

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                E DUFY/AU
                E DUFFY/AU
                E DUFFY/AU
                E DUFFY B/AU
L3           36 S E3,E5,E6,E21,E24,E25,E32,E33
                E MJ/PA,CS
L4           47 S E3-E37
                E M J/PA,CS
                E "M/J"/PA,CS
L5         3427 S RICINOLEIC ACID
L6         3542 S ?RICINOLEIC? ACID

     FILE 'REGISTRY' ENTERED AT 07:17:38 ON 24 AUG 2006
L7            1 S 141-22-0
                E C18H34O3/MF
L8           15 S E3 AND OCTADECENOIC ACID AND HYDROXY AND 9 AND 12
L9           10 S L8 NOT  9 HYDROXY
L10           7 S L9 NOT (LABELED OR (D OR T)/ELS OR C11# OR C13# OR C14# OR 11
                E RICINOLEIC ACID/CN
L11           1 S E3
L12           7 S L7,L10,L11

     FILE 'HCAPLUS' ENTERED AT 07:20:56 ON 24 AUG 2006
L13        2135 S L12
L14         189 S (RICINIC OR RICINOLIC)()ACID
L15          16 S 12 HYDROXYOLEIC ACID
L16          54 S 12(1W)HYDROXY 9(1W)OCTADECENOIC ACID OR 12(1W)HYDROXY(1W)9 OC
L17        4085 S L5,L6,L13-L16

     FILE 'REGISTRY' ENTERED AT 07:22:54 ON 24 AUG 2006
L18           1 S 71-23-8
                E 2-PROPANOL/CN
L19           1 S E3
                E C3H8O/MF
L20           1 S E3 AND IDS/CI
L21          41 S E3 AND PROPANOL
L22           3 S L21 NOT (LABELED OR (D OR T)/ELS OR C11# OR C13# OR C14# OR 1
L23           3 S L18-L20,L22

     FILE 'HCAPLUS' ENTERED AT 07:25:35 ON 24 AUG 2006
L24       75617 S L23
L25       85942 S PROPANOL OR PROPYLALCOHOL OR PROPYL ALCOHOL OR ?PROPYL ALCHOL
L26          91 S L17 AND L24,L25
L27          18 S L26 AND ?PHOSPH?
L28           4 S L26 AND ?TRANSESTER?
                E TRANSESTER/CT
L29        8426 S E4+OLD,NT OR E14+OLD,NT OR E16+OLD,NT OR E17+OLD,NT OR E4-E21
L30           4 S L29 AND L26
L31           4 S L28,L30
L32           2 S L27 AND L31
L33           1 S L32 AND L24
L34           3 S L31 NOT L33
L35           1 S L26 AND L1-L4
L36           1 S L33,L35
                SEL RN

     FILE 'REGISTRY' ENTERED AT 07:29:34 ON 24 AUG 2006
L37          43 S E1-E43
L38           2 S L37 AND P/ELS
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     FILE 'HCAPLUS' ENTERED AT 07:31:33 ON 24 AUG 2006
L39           4 S L38 AND L26
L40           1 S L39 AND L36
L41           3 S L39 NOT L40
L42          14 S L27 NOT L31,L39
                SEL AN 11 L42
L43           1 S L42 AND E44-E45
                SEL RN L43

     FILE 'REGISTRY' ENTERED AT 07:34:33 ON 24 AUG 2006
L44           5 S E46-E50
L45           1 S L44 AND IDS/CI NOT C3H6O
                SEL RN L12
L46         524 S E51-E57/CRN
L47           1 S L46 AND (62309-51-7 OR 71-23-8 OR 67-63-0)/CRN
L48         171 S L46 NOT (MXS OR PMS)/CI
L49         107 S L48 NOT IDS/CI
L50          76 S L49 NOT (COMPD OR UNSPECIFIED)
L51          54 S L50 NOT WITH
L52          53 S L51 NOT SORBITAN
L53          48 S L52 NOT OC5/ES
L54           5 S L53 NOT SALT
L55          43 S L53 NOT L54

     FILE 'HCAPLUS' ENTERED AT 07:38:44 ON 24 AUG 2006
L56          13 S L55 AND L24,L25
L57           0 S L56 AND L38
L58           4 S L56 AND ?PHOSPH?
L59           9 S L56 NOT L58
L60          39 S L46 AND L24,L25
L61           6 S L60 AND L38
L62          16 S L60 AND ?PHOSPH?
L63          10 S L61,L62 NOT L27,L31,L39-L43,L56,L58,L59
L64          23 S L60 NOT L61-L63
L65          14 S L64 NOT L27,L31,L39-L43,L56,L58,L59
                SEL RN 7

     FILE 'REGISTRY' ENTERED AT 07:45:57 ON 24 AUG 2006
L66          57 S E58-E114
L67           1 S L66 AND HARIDIMER?/BI,ENTE

     FILE 'HCA' ENTERED AT 07:46:50 ON 24 AUG 2006

     FILE 'HCAPLUS' ENTERED AT 07:47:34 ON 24 AUG 2006
L68           1 S L67 AND L26,L56
L69           2 S L1,L68 AND L1-L6,L13-L17,L24-L36,L39-L43,L56-L65,L68

     FILE 'WPIX' ENTERED AT 07:49:40 ON 24 AUG 2006
L70         961 S L5 OR L6 OR L14 OR L15 OR L16
                E RICINOLEIC ACID/CN
L71           1 S E3
L72         180 S (R06482 OR R14559)/DCN OR 105647-0-0-0/DCRE OR L71/DCR
L73        1037 S L70,L72
L74       18273 S L25
                E 1-PROPANOL/CN
L75           1 S E3
                E 2-PROPANOL/CN
L76           1 S E3
                E PROPANOL/CN
L77           1 S E3
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                E PROPYL ALCOHOL/CN
L78           1 S E4
L79           2 S L75-L78
L80       12757 S (R00302 OR R00271)/DCN OR (0302 OR 0271)/DRN OR (331-0-0-0 OR
L81          27 S L73 AND L74,L80
L82           4 S L81 AND C10M/IPC,IC,ICM,ICS,ICA,ICI
L83           1 S L81 AND C09K/IPC,IC,ICM,ICS,ICA,ICI
L84           1 S L81 AND C07F/IPC,IC,ICM,ICS,ICA,ICI
L85           3 S L81 AND C11C/IPC,IC,ICM,ICS,ICA,ICI
L86           2 S L81 AND C07C067/IPC,IC,ICM,ICS,ICA,ICI
L87           6 S L82-L86
L88           2 S L87 AND (2002-188714 OR 1989-096261)/AN
L89           1 S L88 NOT ALKANOLAMINE
L90          21 S L81 NOT L87
L91           1 S L89 AND L70-L90

     FILE 'HCAPLUS' ENTERED AT 08:06:48 ON 24 AUG 2006

     FILE 'WPIX' ENTERED AT 08:07:02 ON 24 AUG 2006

     FILE 'WPIX' ENTERED AT 08:07:44 ON 24 AUG 2006

     FILE 'DPCI' ENTERED AT 08:08:27 ON 24 AUG 2006
L92           1 S L1

     FILE 'DPCI' ENTERED AT 08:09:39 ON 24 AUG 2006

     FILE 'HCAPLUS' ENTERED AT 08:10:37 ON 24 AUG 2006
L93        4470 S DIAMOND ?/AU
L94          29 S L93 AND 1964/PY
L95           1 S L94 AND (41 AND 9)/SO
L96           1 S FR2374290/PN
L97           4 S (GB457548 OR GB563481 OR GB591421 OR US1822977 OR US3524751)/
L98          10 S (US4101432 OR US4152915 OR US6018063 OR WO9015127 OR WO922262
L99          15 S L95-L98

     FILE 'WPIX' ENTERED AT 08:16:32 ON 24 AUG 2006
L100          0 S GB457548/PN

     FILE 'HCAPLUS' ENTERED AT 08:18:36 ON 24 AUG 2006
L101          7 S L99 AND L1-L6,L13-L17,L24-L36,L39-L43,L56-L65,L68,L69,L46
L102         15 S L99,L101
L103          2 S L102 AND L38
L104         15 S L102,L103

     FILE 'HCAPLUS' ENTERED AT 08:19:21 ON 24 AUG 2006

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